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CLAIMS

3. A flax seed that is the product of a plant line designated M5791 (American Tissue Culture Collection Deposit #PTA-5755), wherein the linolenic acid content of said flax seed is greater than 70%.
- 5 6. A flax plant designated M5791 (American Tissue Culture Collection Deposit # PTA-5755), wherein the linolenic acid content of said flax seed is greater than 70%.
7. Progeny of a flax plant designated M5791 (American Tissue Culture Collection Deposit # PTA-5755), wherein said progeny produce seeds having
10 a linolenic acid content of greater than 70% of the total fatty acid content of said seed.
8. The progeny according to claim 7 wherein the linolenic acid content is between 70%-80%.
9. Seed from the flax plants of any one of claims 6, 7 or 8.
13. A method of producing a flax plant line comprising the steps of:
- 15 (a) crossing a plant of a flax plant line designated M5791 (American Tissue Culture Collection Deposit # PTA-5755), wherein the linolenic acid content of said flax seed is greater than 70%-, or progeny thereof, with an agronomically elite flax plant; and
- (b) selecting at least one descendant of said cross, said descendant
20 producing seeds having a linolenic acid content of greater than 70% relative to the total fatty acid content of said seed.
17. The progeny according to claim 7 wherein the linolenic acid content is between 70%-75%.

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18. The method according to claim 13 wherein the linolenic acid content is between 70-80%.

19. The method according to claim 13 wherein the linolenic acid content is between 70-75%.

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